

IV. LEGAL REGULATORY SETTING

A. State Regulatory Setting

1. Arizona Department of Water Resources

The 1980 Groundwater Management Act (Code) established limitations on the right to pump groundwater within AMAs. All large water users are subject to mandatory, enforceable conservation requirements. Municipal providers must reduce over time the number of gallons per person per day served to customers in order to meet conservation targets. Agricultural water users must stay within an allotment assigned by ADWR, and no irrigation of new agricultural land is allowed. All large industries are directly regulated through allotments or required conservation practices. In addition, new rules promulgated under the authority of the Code require the use of renewable water for new subdivisions. Because population growth requires the development of new subdivisions, these rules provide a strong incentive for communities to develop renewable water supplies. One method provided by the Code to meet the requirement for renewable supplies is recharge.

The original recharge legislation that was passed in 1986 clarified the major legal issues concerning status and ownership of stored water. In the following years, a plethora of recharge programs and options was added to Arizona law. In 1994, a legislative effort to simplify the recharge statutes resulted in the Underground Water Storage, Savings and Replenishment Program.

Under this program, permits from ADWR are required whenever water is intentionally added to an aquifer. Permits are required in order to operate a storage facility, store water at a storage facility, and recover stored water. Unintentional or incidental recharge of water is not regulated under Arizona's underground water storage program. Examples of incidental recharge include water being added to the aquifer as a result of use for agricultural purposes or after discharge of water being treated at a wastewater treatment plant. Additionally, groundwater which is withdrawn and then recharged into the same aquifer is not "added to the aquifer" and is, therefore, not regulated by ADWR (Cahoy, 1998).

There are two types of storage facility permits: Underground Storage Facility permits and Groundwater Savings Facility permits. USF permits apply to any facility that directly recharges water, including constructed projects such as spreading basins or injection wells, and managed projects using natural stream channels. To obtain a USF permit, an applicant must demonstrate 1) technical and financial capability to construct and operate the facility, 2) the hydrologic feasibility of the project, 3) that the project will not cause "unreasonable harm" to land or water users, and 4) that any necessary floodplain use permits have been obtained. The ADEQ also reviews the permit application for water quality impacts (see below).

A GSF permit applies to a facility that uses a renewable water supply "on a gallon-for-gallon substitute basis" in-lieu of the groundwater would otherwise have been pumped (A.R.S. § 45-

812.01(B)(2)). Usually GSF permits are obtained to replace groundwater used for irrigated agriculture with CAP water. In order to obtain a GSF permit, the applicant must demonstrate 1) that the groundwater to be replaced would have otherwise been pumped, 2) that no other source of “in-lieu” water is reasonably available, and 3) that the recipient of the in-lieu water could not reasonably be expected to use the in-lieu water without the added benefits of operating a GSF. The permit application also must show what evidence will be submitted with annual reports to prove the amount of water saved. The Code provides guidance on the kinds of information that should be included as evidence. A GSF permit cannot be obtained for in-lieu water delivered before October 1, 1990.

Entities interested in taking advantage of the benefits of recharge should note that the Code includes a list of facilities that do not qualify as storage facilities. These include lakes, ponds, wetlands and similar bodies of water not specifically designed for the principal purpose of groundwater storage; man-made conveyance systems, such as irrigation canals; and incidental recharge from water uses.

A separate permit must be obtained in order to store water in a USF or GSF. While the facility permit is usually held by the operator of the facility, storage permits are held by entities using the facility to accrue long term storage credits or to annually recover stored supplies. A water storage permit allows the holder to store up to a specified amount of a particular water supply in a specific storage facility. To obtain a water storage permit, an applicant must have the right to use the water that will be stored at the facility and may not be capable of using the water directly (see Appendix C: “Water Storage Credit Policies and Rules”). Applicants also must show that they have applied for an APP from ADEQ, if one is required (see this chapter, section A.2). Water storage permits are issued for not more than 50 years and may be renewed. Storage permits may be conveyed from the permit holder to another entity if that entity meets the requirements for obtaining a storage permit. Several entities may hold storage permits in the same facility, and frequently storage permits held at a single facility will total many times more water than the facility is capable of storing in any year. This system provides flexibility to vary the amount of water stored at the facility by each storage permit holder.

A water storage permit holder can recover the water in the same calendar year it is recharged (annual storage and recovery) or may accrue long-term storage credits. Long-term storage credits are maintained by ADWR in a long-term storage account. The amount of storage credits that will be assigned to the storer may vary with the type of project and source water. For GSFs and constructed USFs, the amount is usually 95% of the water recharged by the storer minus evaporation losses. For managed USFs storing effluent, the amount is 50%.

Rules governing the accrual, transfer and use of annual storage and recovery (ASR) and long-term storage credits are linked with Assured Water Supply (AWS) rules and are intended to operate as incentives to recharge renewable water only to the extent that direct use of renewable supplies is infeasible. A fuller description of storage credit rules can be found in Appendix C.

In the Tucson AMA, current storage permit holders are municipal providers, the Central Arizona Water Conservation District (CAWCD) and the AWBA. Golf courses and others with the legal right to a source of excess renewable water may also hold storage permits in the future. The AWBA stores CAP water primarily for the benefit of municipal and industrial CAP subcontractors. However, other entities that may benefit from AWBA storage may include cities outside the CAP service area along the Colorado River in Arizona, California, and Nevada and Indian tribes involved in water rights settlements. The AWBA is not authorized to recover water itself. How AWBA credit recovery will be handled is the subject of on-going study by the Bank. CAWCD's storage permits will be used by the Central Arizona Groundwater Replenishment District (CAGRD) (a division of CAWCD) to meet its replenishment obligations. The CAGRD stores water on behalf of members, primarily to replace groundwater already pumped in excess of the member's groundwater allowance (see this chapter, section C.2).

In order to use water stored in a storage facility, a recovery well permit must be obtained. The storer may recover water from a permitted recovery well in the area of impact of the storage facility. (The area of impact is calculated annually based on actual recharge and recovery volumes from the prior year, but recovery is always allowed within the "safe harbor", which is defined as a one-mile radius surrounding the facility.) Water also may be recovered outside the area of impact if the recovery well is in the same AMA and the location of the well is consistent with the AMA's management plan and goals. In the Tucson AMA, under the Second Management Plan, this means that the recovery well cannot be located in an area experiencing four feet or more of groundwater decline annually, unless it is part of a groundwater remediation effort. The ADWR is preparing recovery rules for the Third Management Plan that may be more restrictive.

The current law provides protection for stored water by prohibiting ADWR approval of applications for designations or certificates of AWS, groundwater withdrawal permits, and well construction or replacement permits, unless the application would have been approved if the recharge project had not existed (A.R.S. § 45-856.01).

Stored water also can be designated nonrecoverable at the request of the storage permit applicant. Storage of nonrecoverable water will not result in annual or long-term storage credits, and cannot be used for replenishment purposes (A.R.S. § 45-833.01).

2. Arizona Department of Environmental Quality

ADEQ has responsibility for protecting the quality of water resources in the State. Unless otherwise exempted, discharge of pollutants that has the potential to reach an aquifer must receive an APP from ADEQ certifying that specified measures have been or will be taken to prevent pollution of the aquifer.

Recharge projects using CAP water, or certain other surface waters excluding effluent, are exempted from APP requirements. In this case, ADEQ determines whether a facility is in a location that will promote either the migration of a contaminant plume or the migration of a poor quality groundwater area so as to cause unreasonable harm or is in a location that will result in

pollutants being leached to the groundwater table so as to cause unreasonable harm (A.R.S. § 45-811.01(C)(5)). For any such facility, ADWR, after consultation with ADEQ, may include in its permit any water quality related requirements deemed necessary.

Underground Storage Facilities using effluent require an APP from ADEQ. In general, an APP is required whenever there is discharge to the aquifer. The permit must show the discharge will not result in a violation of an aquifer water quality standard at the point of compliance in the aquifer. Recharge projects employing spreading basins, stream channels or injection methods would all be considered to be discharging to the aquifer.

A Wastewater Reuse Permit applies to reclaimed wastewater transported from the point of treatment to the point of use, as for agricultural irrigation in a Groundwater Savings Facility. Standards are set in the permit to protect against public exposure. Wastewater reuse is exempt from APP requirements.

ADEQ also administers the National Pollution Discharge Elimination System (NPDES) permitting for the EPA. A NPDES permit must be obtained for any entity to discharge pollutants from a point source into navigable waters of the U.S. For the purposes of this program, navigable waters of the U.S. include all major and most secondary stream channels.

ADEQ is the designated agency of the state to administer the Federal Safe Drinking Water Act, and in this capacity will promulgate rules for determining on a case-by-case basis whether water recovered from CAP recharge projects is considered “groundwater under the direct influence of surface water”. Such water must be treated according to the drinking water rules that apply to surface water, while groundwater need not be treated unless it fails to meet primary drinking water standards. (A national groundwater disinfection rule is currently being contemplated which could change this). If water recovered from a recharge project is determined to be “groundwater under the direct influence of surface water”, filtration and disinfection could be required before the water enters the distribution system. This treatment could add significantly to project costs. Draft rules on this subject have not been finalized as of July 1998. However, a summary of the draft rules follows.

For public water systems using a well within 500 feet lateral distance from a surface water body, ADEQ requires a determination of whether the well is pumping “groundwater under the direct influence of surface water.” ADEQ’s Drinking Water Program currently regards recharge basins, in-channel recharge facilities, injection wells, or virtually any other mode of discharge of CAP water into wells or an aquifer as a “surface water body.” Thus, if a recharge facility is designed with recovery wells that are within 500 feet, or utilizes existing wells within 500 feet of the facility, a determination would be required. ADEQ will first try to assess the vulnerability of the well to the direct influence of surface water using existing hydrogeologic and well construction data. ADEQ may determine that the groundwater source is sufficiently separated from the surface water source and is, therefore, not under the direct influence of surface water. However, if there is insufficient data available, or it is determined that the groundwater source has a high vulnerability

to influence of the surface water source, then the water system will be required to determine through testing whether it is pumping “groundwater under the direct influence of surface water.”

While a recharge project’s recovery wells may qualify for testing, they do not need filtration and disinfection treatment unless the tests confirm a direct surface water influence. There are two tests available for water system operators: Microscopic Particulate Analysis (MPA) and Water Quality Parameter testing (WQP). ADEQ has more confidence in the MPA test, which looks for insect fragments, leaf parts, etc. that have not been filtered out by aquifer materials. The WQP test looks at stability of certain water quality indicators over time to see if there is a transient response to surface water input. If the MPA test is chosen, ADEQ anticipates that only two tests would be required, one during dry season and one during wet season. ADEQ does not regard the testing as an ongoing monitoring requirement. Instead, in most instances, a one time verification with the two season testing regimen is enough to establish that a recovery well is not directly under the influence of surface water.

3. Arizona Corporation Commission

The Arizona Corporation Commission (ACC) regulates privately owned and operated water companies. The ACC issues a Certificate of Convenience and Necessity that defines a water company’s service area, and approves the company’s water rates. The ACC scrutinizes the company’s allowable expenses when deciding whether to approve rates and may disallow expenses that it considers should not properly be paid by customers. Expenses that may or may not be allowed to be passed on to customers include costs for groundwater recharge and costs for retaining a CAP subcontract when the water is not currently being served to customers. If the ACC decides for most of its regulated water companies that these costs may not be passed on to customers, this will create a strong disincentive for private water companies to participate in recharge projects.

In May 1997, the ACC decided in the Citizens’ Water Utility rate case that the company’s costs for retaining its CAP contract could not be charged to customers as long as Citizens’ does not have a concrete plan for using CAP to the benefit of its customers. The Commission left open the possibility that Citizens’ could amortize its accrued costs once it begins using CAP water, if it meets an ACC-imposed deadline.

Public water utilities, such as Tucson Water, and special districts, such as Flowing Wells Irrigation District and Metropolitan Domestic Water Improvement District, are not subject to ACC regulation.

B. Federal Regulatory Agencies and Laws

1. Fish and Wildlife - Endangered Species Act

The U.S. Fish and Wildlife Service (FWS) must be consulted when a recharge project involving a federal government action is to be constructed. FWS may issue a Biological Opinion on whether a project is likely to jeopardize endangered or threatened species. If FWS determines the project is

likely to jeopardize such species, the project's sponsors must consult with FWS on ways to avoid or mitigate the project's negative impact. In the Tucson AMA, projects that involve the U.S. Bureau of Reclamation (USBR), rights-of-way on federal land, or similar federal participation may require consultation with FWS.

The status of the CAP with respect to endangered species is still unresolved. In 1994, USBR and FWS worked out a set of measures to protect endangered and threatened native fish species on the Gila River watershed. These measures included: 1) construction of physical fish barriers and maintenance of existing electrical fish barriers, 2) development and implementation of a program to monitor fish populations in the CAP aqueduct and selected contiguous waters, 3) funding for threatened and endangered fish conservation, 4) funding for control activities of non-native fishes, and 5) development and implementation of an information and education program on non-native species introductions into native aquatic communities.

In the same year, the Bureau issued a Biological Assessment for the Santa Cruz River Basin that concluded the CAP, with similar protective measures in place, would have no effect on endangered aquatic species in the basin. In a letter of response, FWS disagreed with the conclusions of the assessment, stating that there is a high probability that non-native fishes or other non-indigenous aquatic organisms will escape from the CAP aqueduct or associated project features over the life of the project. CAP water-irrigated agricultural lands, the Tucson Aqueduct System Reliability Investigation (TASRI) terminal storage reservoir (should it ever be built), City of Tucson water treatment, and certain groundwater recharge projects are possible avenues of escapement. USBR and FWS are now in formal consultation, but as of July 1998, FWS had not issued a draft Biological Opinion on the Santa Cruz River Basin.

Groundwater Savings Facilities using CAP water have gone forward in the Santa Cruz River Basin without FWS consultation based on the understanding on protective measures reached between FWS and USBR for the Gila River watershed. CAWCD, however, requested that 1996 and subsequent funds for endangered species mitigation be deleted from the congressional appropriation. Protective structures were not built and several issues disputed by USBR, FWS and CAWCD are being litigated. What this means for local recharge projects is uncertain. At best, projects that do not involve a direct federal action will not be influenced by decisions made by USBR or FWS affecting the CAP system. At worst, all CAP recharge projects will have to consult with FWS on endangered species protection and possibly be required to avoid building projects in certain habitats and add fish barriers or similar protective structures to their designs. These protective measures could preclude certain types of recharge projects.

For a more detailed chronology of the ESA's application to the CAP, see the RRC Technical Report, Section V.H.

The ESA may also affect recharge projects in the Tucson AMA if an endangered species should come to depend on habitat created or sustained by a project. The Southwest Center for Biological Diversity has filed suits requesting that Hoover and Roosevelt Dams be operated in a way that

protects the habitat of the endangered Southwestern willow flycatcher, which exists around the margins of the reservoirs created by the dams. If a facility can be compelled to protect habitat it creates or sustains, then the operation of recharge projects may be legally constrained for endangered species protection.

2. Army Corps of Engineers/Environmental Protection Agency - Clean Water Act

Section 404 (Wetlands) of the Clean Water Act requires that the U.S. Army Corps of Engineers (COE), with the concurrence of EPA, issue or deny permits for activities that result in the discharge of dredge or fill material into the waters of the U.S. For the purposes of Section 404, waters of the U.S. include most streams, stream channels and wetlands in Arizona. Intended to prevent the unlawful filling of wetlands, Section 404 would apply to any channel modification made for in-channel recharge projects. Section 404 permits must be certified by ADEQ, under Section 401 of the same Clean Water Act. Certification depends on a review “solely to determine whether the effect of the discharge will comply with the water quality standards for navigable waters...” (A.R.S. § 49-201(C)).

3. Comprehensive Environmental Response Compensation and Liability Act

EPA is involved in the clean-up of contaminated groundwater under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), commonly known as “Superfund.” A recharge project with the potential for affecting activities at a Superfund site will have to consult with the EPA office having jurisdiction over the site. In the Tucson AMA, one Superfund remedial site exists, that is the large trichloroethylene (TCE) plume near the Tucson International Airport.

4. Federal Aviation Administration - Hazardous Wildlife Attractants

The Federal Aviation Administration (FAA) recommends against siting facilities “that attract or sustain populations of hazardous wildlife within the vicinity of airports...” (FAA Advisory Circular AC 150/5200-33). Such facilities should be located with a separation distance of 5,000 to 10,000 feet generally, and 5 miles for approach and departure airspace. The FAA may request modifications to recharge projects near airports to make them less attractive to birds. FAA’s concern is to protect aircraft during take-off and landing from potential problems of encountering birds. A bird abatement plan may be necessary.

5. Arizona State Museum - State Historic Preservation Act

Under Arizona’s State Historic Preservation Act, an archaeologic survey is required wherever the land surface will be excavated and/or inundated for a project. The survey is done to ensure that no historic or prehistoric sites will be disturbed. If no archaeologic remains are found, a clearance is issued. If archaeologic or paleontologic items are found on state, county, or municipal lands, it is necessary to contact the Director of the Arizona State Museum. It also is necessary to contact the Director of the Arizona State Museum if funerary remains are found on private lands. Other agencies that should be contacted if archaeologic remains are found include the Tucson Historic Preservation Office and/or the Pima County Historic Preservation Office.

C. Other Governmental Agencies -- Recharge-related Purposes and Authorities

1. Central Arizona Water Conservation District

CAWCD was established to operate the Central Arizona Project and repay the federal construction debt for the project. In addition to these responsibilities, CAWCD has been assigned recharge-related functions, including planning, construction, and operation of State Demonstration Projects (A.R.S. § 45-891.01 et seq.). Funding for State Demonstration Projects was provided from taxes levied by CAWCD of four cents per \$100 assessed valuation in Maricopa and Pima Counties between 1991 and 1996. Monies no longer are being added to the fund for state demonstration projects, and most of the Pima County fund has been obligated to construct recharge projects. Three projects included in the Regional Recharge Plan have received or will receive state demonstration project funds: Pima Mine Road, Avra Valley Recharge Project, and the Lower Santa Cruz projects. CAWCD also holds a Groundwater Savings Facility permit at BKW Farms.

State Demonstration Projects were created to encourage development of underground storage facilities. They are now used by CAWCD, the AWBA, and other parties to store water for firming up municipal and industrial CAP subcontract deliveries and to earn credits or replenish water for AWS purposes. In the event of a shortage of CAP water or a significant outage on the canal, CAWCD may deliver water stored by CAWCD or the AWBA to customers in need of the water. The entity receiving this water must pay CAWCD recovery and conveyance costs, but not construction, operation or maintenance costs for the facility.

CAWCD is governed by a fifteen-member board of elected representatives from the member counties. Pima County has four members. Among its duties, the Board sets policy for the CAP, which CAWCD implements. As operator of the CAP, CAWCD established an administrative system to take orders, schedule deliveries, collect charges and handle contingencies. Each year CAWCD estimates the amount of water that will be available to customers and accepts orders on the basis of that estimate. As long as more CAP water exists than is ordered by subcontractors, CAWCD will schedule orders for excess water. Orders for scheduled water deliveries must be made by October 1 for the next calendar year. Additional water may be purchased on demand as long as excess CAP water supplies and excess canal capacity exist. CAWCD maintains an informal working relationship with its CAP water customers for flexibility in meeting system needs.

Priorities for delivery of subcontracted CAP water, as established in law, assign the highest priority to Indian and M&I subcontractors. The lowest priority is assigned to non-Indian agriculture. This means that if scheduled deliveries must be curtailed in any year, deliveries to non-Indian agricultural subcontractors will be cut first. This schedule of priorities does not apply to daily deliveries, which may be curtailed at the discretion of CAWCD as long as full delivery of scheduled amounts will be made on an annual basis.

As currently implemented, daily priorities place direct municipal uses first, but place agricultural uses before municipal recharge projects, on the rationale that timing of deliveries is more

important to agriculture than to recharge. Municipal providers have expressed concern about the implications of this policy, as a shift in the burden of delivery reliability away from agriculture towards M&I users could affect the AWS program and/or increase costs associated with design and operation of recharge facilities. In addition, CAWCD is treating all deliveries to agricultural users the same when the need to curtail daily deliveries arises, regardless of the type of water (subcontract, excess CAP water or GSF water for agriculture), the price of the water, or the nature of the entity that scheduled the delivery. Discussions are continuing on this policy and may lead to amendments in the future.

2. Central Arizona Groundwater Replenishment District

CAGRD was established as an operating division of CAWCD in 1993. CAGRD gives municipal providers or subdivisions a means to replenish groundwater that is withdrawn in excess of the amount of groundwater allocated to them under ADWR's AWS rules. The details for calculating a member's replenishment obligation are different for the two different kinds of members (designated water providers versus member lands covered by certificates of AWS), but for both kinds of members the minimum amount of water that must be recharged is very small in the early years and grows larger over time.

Membership contracts. CAGRD provides replenishment services to members who agree to the terms of a membership contract. Members may be municipal providers or subdivisions. An applicant for membership must 1) show that it has applied to ADWR for an AWS designation or certificate, 2) agree to the "covenants, conditions and restrictions" of membership and 3) comply with annual reporting requirements. These requirements include the amount of groundwater delivered by the water provider, the amount of "excess groundwater" delivered and the basis for calculating these amounts. If the member is a subdivision, the report must allocate an amount of groundwater and excess groundwater to the subdivision as a whole and to each parcel in the subdivision. Excess groundwater is an amount that can vary at the discretion of the provider from a minimum calculated on the basis of a formula in the contract, to the total amount of groundwater delivered in any year.

Replenishment accounts. CAGRD maintains a replenishment account for each member. It computes each member's replenishment obligation yearly based on the member's annual report and debits the account by the calculated amount. Members can build limited credit in the account by purchasing replenishment services.

The water used for replenishment need not be CAP water, but may be other Colorado River water, effluent, groundwater from outside the AMA, or surface water.

3. Arizona Water Banking Authority

The AWBA was created in 1996 to store currently unused portions of Arizona's allotment of Colorado River water. Five specific legislative sub-goals were identified for the AWBA, including 1) increasing utilization of Arizona's Colorado River allotment, 2) enhancing the reliability of municipal CAP deliveries, 3) helping meet local water management objectives, 4)

facilitating Indian water rights settlements, and 5) providing for interstate water banking with Nevada and California.

The primary objective of the AWBA in the first years of its operation is to store as much Colorado River water in Arizona as possible within the constraints of funding and the physical system. The Bank's other objectives may take on more importance in the future, but its current activities focus on storing excess CAP water for the protection of M&I CAP subcontractors from future shortages.

The AWBA purchases water for drought storage with funding from a tax on property (four cents per \$100 assessed valuation) in the three counties served by the CAP, which must be spent for the benefit of the county in which it was collected. Funding also comes from a pump tax on groundwater users of \$2.50/AF, and general fund appropriations. The AWBA must develop an annual operating plan that shows how much water will be recharged and where the recharge will occur. Although the Bank is not obliged to recharge water in the county or AMA from which tax funds were collected, interpretation of the phrase "for the benefit of" makes local recharge a major focus for the AWBA.

The AWBA has estimated that it will recharge between 35,000 and 42,000 AF annually in the Tucson AMA in the next few years. In the AWBA's September 25, 1997 CAP/AWBA Pricing Analysis, the AWBA estimated that a total of 750,000 AF needs to be stored in the AMA to firm up the supplies of municipal CAP contractors in the area.

The AWBA is required to assess the capacity at existing recharge facilities to meet its storage needs, and plan for additional storage capacity should the capacity available fall short of the amount needed. The AWBA's Storage Facilities Inventory assessed capacity separately for the Phoenix, Pinal, and Tucson AMAs, as well as for the areas outside of the AMAs. The inventory found that sufficient capacity existed except in the Tucson AMA. In the Tucson AMA, the AWBA intends to utilize recommendations from the Regional Recharge Planning Process as it approaches its plan for additional storage facilities. The AWBA expects the Tucson AMA's Regional Recharge Plan to provide information that the Bank will consider when it evaluates potential storage facilities for inclusion in its plan.

In developing its plan, the AWBA must consider whether delivering and storing CAP water at a proposed facility is feasible, whether it meets water management goals, and whether landowners and water users in the vicinity of the proposed facility would be harmed by adverse impacts. The AWBA also must consider the amount and purpose of the water to be stored and the potential cost to the Bank.

Although the AWBA cannot construct, own or operate storage facilities itself, it may facilitate development of additional capacity in partnership with other entities, including CAWCD. In order to include a storage facility in its plan, the AWBA also must consider the costs that it would pay to facilitate development of the facility and the facility's cost-effectiveness. Once the plan has received public review and been adopted, the AWBA is obligated to implement it.

Only 3,100 AF of AWBA water was recharged in the Tucson AMA in 1997 (2,100 AF at Avra Valley Recharge Project and 1,000 AF at CAVSARP) due to capacity constraints in direct recharge facilities. The original plan for the AMA in 1997 envisioned 19,100 AF of recharge of AWBA water. Additional storage capacity will become available in 1998 when the recharge projects previously identified as AWBA storage facilities become operational or expand their storage capacity. However, inadequate recharge facility capacity continues to be a serious problem for the AWBA and others.

4. U.S. Bureau of Reclamation

USBR was responsible for construction of the Central Arizona Project and it collects repayment of Arizona's debt to the federal government for that construction. As the agency responsible for construction, USBR also consults with FWS on endangered species issues and implementation of any mitigation measures (see this chapter, section B.1.). In addition, USBR administers a capital construction loan program used by irrigation districts to build conveyance systems for taking water from the CAP canal. That program has not been used in recent years, as a result of the defaults on repayment by some irrigation districts. It is potentially available as a source of construction funds for CAP recharge projects.

USBR also is responsible for executing the federal government's part in the Southern Arizona Water Rights Settlement Act. In this capacity, USBR is assisting the San Xavier District of the Tohono O'odham Nation with plans to develop recharge projects. The Bureau has been involved in construction of the San Xavier District's arroyos project, and in permitting activities for in-channel recharge of effluent along the Santa Cruz River. In addition, USBR has been investigating strategies for using the value acquired from the Secretary's effluent as one way of acquiring exchange water as agreed to in SAWRSA.

USBR has several other responsibilities that may be relevant to recharge: 1) the High Plains States Groundwater Demonstration Program, 2) the "Title 16" program for wastewater reuse and wetlands, 3) technical assistance for local water resource planning, 4) environmental enhancement and 5) terminal reliability storage for the CAP. All of these responsibilities may present opportunities for the contribution of federal funds to recharge projects.

D. Local Political Jurisdictions

Local political jurisdictions, including Pima County, the City of Tucson, and the Town of Marana, have floodplain ordinances requiring that construction carried out in the floodplain within their jurisdictions be permitted. This requirement applies to all constructed recharge projects in the floodplain. The floodplain is defined by a 100-year flood event.

The City of Tucson, as a result of public vote approving Proposition 200 of 1995, the Water Consumer Protection Act, enacted an ordinance that has had a major impact recharge projects in the Tucson AMA. It prohibits the City of Tucson from delivering CAP water to its customers for domestic use unless it is treated to the quality of groundwater from the City's Avra Valley

Wellfield for salinity, hardness and dissolved organic material. The Act enumerates several alternative uses for CAP water for which recharge is the most likely vehicle. It specifically endorses recharge, by requiring the City to use recharge to completely replenish all groundwater withdrawals from Tucson's Central Wellfield. However, well-injection recharge is prohibited unless the injected water is treated to the same standards as Avra Valley groundwater and, in addition, is free from disinfection byproducts. Proposition 200 also prohibits the City from recharging water "in any area that contains or is adversely affected by toxic landfills." The RRC Technical Report contains an analysis of the potential to replenish the wellfield and prevent subsidence in the area within the constraints of the Act. The RRC found that in-channel recharge that avoided areas of contamination would be insufficient to replenish the amount of water that is pumped annually from the wellfield unless pumpage was substantially curtailed. The complete text of Proposition 200 is included in this report as Appendix D.

E. Indian Nations

The San Xavier District and portions of the Schuk Toak District of the Tohono O'odham Nation are located south and west of the City of Tucson, in the Tucson AMA. Within the Tucson AMA, the Nation is allocated 37,800 AF of CAP water annually. Under the terms of SAWRSA, the Secretary of the Interior must acquire 28,200 AF per year of effluent from Pima County wastewater treatment facilities and may use the value derived from exchange of that water to supply the same amount of water suitable for agriculture to the Districts. Some of the SAWRSA water supplies are expected to be used for farming on the reservation, but the Districts have been exploring opportunities for recharge to restore higher groundwater levels, riparian vegetation and wildlife habitat.

Tribal governments have jurisdiction over recharge projects when project facilities or conveyance structures are located on tribal land or when water allocated to the tribes will be recharged. The Tohono O'odham Nation and the San Xavier and Schuk Toak Districts have government organizations concerned with the development, regulation and protection of water resources. The Water Resources Committee of the Nation's Legislative Council deals with water resources issues at the policy level and the Water Projects Office provides a staff with technical water resources expertise. The Nation has not promulgated rules governing tribal involvement in recharge projects.

The Pascua Yaqui reservation is located just north of the San Xavier District and has a Community Planning office within their Government Operations department that handles tribal involvement in recharge and makes recommendations to the governing body.

The State of Arizona may enter into an intergovernmental agreement with tribal governments to establish criteria consistent with the State's Underground Water Storage program for the transferability of storage credits for water recharged in projects on land under the control of the tribe. No such agreement currently exists.